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THE BOOK LOOK NOOK: AN INFORMATIONAL
SYSTEM LITERATURE SEARCH PROGRAM

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education: Instructional Technology Option

by
David Roy Karlquist

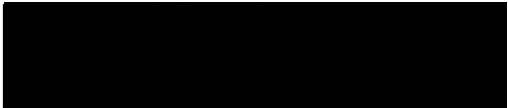
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Approved by:


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6/6/97
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ABSTRACT

Since the late 1980s, the language arts curriculum pendulum has been swinging from basal readers and phonics, to what were called "core literature" books, i.e., select books chosen for students at particular grade levels. This decade (90's), the pendulum is again swinging away from core literature, and a major focus is on books similar to, but more diversified than, the core literature selections.

With time constraints and curriculum demands increasing, teachers are finding it more and more difficult to meet these changes and still do an effective job of teaching. They need tools that will enable them to perform their duties with more efficiency, thus freeing up more time for instruction and relieving pressure on their professional obligations.

This project, titled The Book Look Nook (BLN), is designed to be a tool that teachers can access to find books for language arts instruction that fit a specific learning objective. Through the use of a desktop database manager software, FileMaker^(R) Pro, this project gives literature information efficiently and effectively. The program eliminates the need to spend many hours seeking out pertinent book selections to go with a particular unit. In short, The Book Look Nook takes care of the footwork necessary to search for language arts materials in today's classrooms.

Geared toward the fifth grade reading level, the user of BLN will be able to find books according to subject areas, and genre. Books listed within this program also contain a synopsis and the ISBN number.

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TABLE OF CONTENTS

ABSTRACT.....	iii	
ACKNOWLEDGMENTS.....	iv	
LIST OF FIGURES.....	vii	
CHAPTER ONE - INTRODUCTION		
Whole Language Approach.....	1	
Statement of Problem.....	4	
Project Overview.....	4	
CHAPTER TWO - REVIEW OF RELATED LITERATURE		
The Holistic Approach to Teaching.....	6	
Components of a Holistic Program.....	12	
Literature Support in the Classroom.....	19	
Technology in the Classroom.....	26	
Information Systems.....	27	
CHAPTER THREE - GOAL AND OBJECTIVES OF PROJECT.....		29
CHAPTER FOUR - DESIGN AND DEVELOPMENT		
Technical Requirements.....	30	
Economic Feasibility.....	31	
Project Design.....	31	
Program Flowchart Layout.....	32	
Screen Design and Layout.....	34	
User-Friendly Features of The Book Look Nook.....	44	
Scripting.....	46	
Formative Evaluation.....	50	
Procedure.....	50	
Feedback and Recommendations.....	51	
Revisions.....	51	
Strengths.....	51	

Limitations.....	52
Recommendations.....	52
APPENDIX A: THE BOOK LOOK NOOK DISK.....	54
APPENDIX B: ALPHABETICAL SORTING BUTTON SCRIPT.....	55
APPENDIX C: CLEAR FIELDS BUTTON SCRIPT.....	56
APPENDIX D: SEARCH CATEGORIES BUTTON SCRIPT.....	57
APPENDIX E: SELECT ALL SCRIPT.....	58
APPENDIX F: ADD NEW BOOK SCRIPT.....	59
APPENDIX G: IRB APPROVAL LETTER.....	60
REFERENCES.....	61

LIST OF FIGURES

Figure 1.	General flowchart of The Book Look Nook.....	33
Figure 2.	Welcoming page.....	35
Figure 3.	Program description page.....	36
Figure 4.	Options page.....	38
Figure 5.	Alphabetical list choices page.....	39
Figure 6.	Sample alphabetical page, by title.....	40
Figure 7.	Blank search page.....	42
Figure 8.	Sample category search page.....	43
Figure 9.	End page.....	45

CHAPTER ONE

INTRODUCTION

Whole Language Approach

The field of education is ever-changing, with many curriculum areas to teach to all students at all grade levels. Each area of study is undergoing constant revision and change brought about by many individuals and groups who have the students' best interests at heart. This is true not only of the major courses of study, such as language arts, mathematics, social studies, and science, but the less focused-upon fields such as fine arts (music, art), physical education, etc. These refinements are being made by a variety of groups, some of which work directly with large numbers of students, and others who work in small, scientific studies. Either way the curriculum can be altered when a new and what is considered better way of teaching comes along.

As education has evolved, many philosophies have come and gone, or been altered. It used to be that teachers "directed". Later there were teachers who saw themselves as facilitators. They provided their students with a rich learning environment, then stood back and let the students explore. Some students struggled through reading, others just plain struggled. Right now the emphasis is on intervention, teachers helping students with individual struggles as they arise (Parker, 1992).

Since the late 1980s, the curriculum pendulum has been swinging toward what is referred to as Whole Language

(Cazden, 1991; Cordiero, 1992; Burke-Hengen, 1995). Whole language is the term used for teaching literacy skills by immersing children in literature, and using reading and writing for meaningful communication right from the very beginning. Children are trusted to learn to read and write in much the same way they learned to talk - by doing (Forester & Reinhard, 1991).

Following the guidelines set forth by the State of California, the Desert Sands Unified School District (DSUSD) Board of Education and the district Curriculum Council have set forth standards for the teachers of the district to follow, many of which fall into the Whole Language category.

Along with curricular changes come alterations in the appropriate materials needed to properly carry out the new procedures and guidelines. Each program that is developed requires its own set of resources in order for implementation to be complete. Depending on the program or philosophy, these resources may consist of a specific set of items, or it could involve a vague set of suggested or implied materials.

In the case of the Whole Language philosophy, there is no exact list of supplies necessary to get under way. With that in mind, teachers and administrators of Desert Sands Unified School District needed to determine the minimum purchases needed for each school site.

When all was said and done, the main emphasis on monetary expenditures in Desert Sands USD was in the area of language arts. The language arts task force compiled an approved list of "core" literature books for each grade

level, story books and novels which covered several genre and were determined to be at a given grade level. The district purchased many of the titles recommended and supplied the schools. Unfortunately, when it came time to distribute materials among the schools an inequity problem developed. The schools were not supplied with the same titles or the same number of books. For example, of the twelve core literature books for fifth grade, one school has been supplied with eight of the titles, while another schools has ten. Of the four missing titles from the first school, three of them are available at the second school. Of the titles that are available in the schools, only seven have enough in stock to supply a classroom, while none supply all classes.

In addition to the above, of the books that were purchased for grade five, only six are currently accompanied by a comprehensive unit. Teachers choosing to use any of the other books must research and develop their own materials in order to properly cover the concepts needed.

On top of the lack of books available, the books that are in the schools, although adequate for certain subjects, are not as across-the-curriculum friendly as they might be. Only two can be classified in areas other than language arts, both falling into the social studies category. The current core literature books also lack the wide range of readability needed for a typical fifth grade classroom, not meeting the needs of low as well as higher readers. Of the books on the list, none are considered below fifth grade reading level, while half would be classified above fifth grade level.

In other words, although all teachers are expected to cover the same curriculum framework, have the same goals in the same subject areas, different schools have different sets of books to use for their language arts programs. Of those books available, few target curriculum areas other than language arts.

Statement of Problem

Due to the limited resources available at this time in language arts, social studies, and math and science, fifth grade teachers may find it difficult to cover all curricular areas as effectively possible. Teachers would be more apt to impact the students' learning if more resources were readily accessible. At the current time the number of core literature books, used in place of basal readers, is limited. Of those that are available, their distribution among school sites is very uneven and sporadic. Due to the limited supply and uneven distribution of literature texts on hand, teachers find it difficult to accomplish curriculum goals. Teachers need easy access to a wider range of core literature books if these goals are to be fulfilled.

Project Overview

It is the purpose of this project to design and develop an information system that will enable fifth grade teachers of Desert Sands Unified School District and other interested parties to access a data base of language arts core literature books that they can use when they teach using the

whole language philosophy. The computer program will be operated by a master operator or teacher who will access requested information for individual teachers, along with indexing and distributing many of the reading materials. This information system will include an across-the-curriculum listing of alternate choices for core literature. The user will be able to access books by different categories, which include curriculum area, genre, and subject matter. Each category accessed will give the user the ability to choose for preview one or more books from the set of books that fits that category. Each available title will include a separate screen showing the cover of the book along with a brief synopsis of the story contents. Each individual book synopsis page will contain user-friendly buttons to readily maneuver around the complete information system.

The above-described information system is designed with fifth grade teachers in mind. Given the limited quantity and a number of classes competing for materials, its purpose is to be used as a tool to help relieve the burden of having to search literature collections in order to meet state guidelines for Grade Five in all areas of the curriculum. This computer-based information system is presented along with this publication, both in print and Macintosh disk versions (see Appendix A).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter will examine the importance of a variety of literature genre and subjects within the classroom. It will discuss the holistic approach to teaching, giving a brief discussion of the differing aspects and components of the holistic philosophy of teaching, and the integration of books into and within different curricular areas. This chapter will also include a brief overview of information systems for teaching.

The Holistic Approach to Teaching

With the onset of the Whole Language approach to teaching in the late 1980s and early 1990s, many classrooms, schools, and school districts saw their textbooks give way to multiple copies of quality children's literature. In theory, enough copies were to be purchased for the books to be used whole class and for the teacher to have a personal copy as a teacher's edition. The core books serve as a mainstay of the reading program, with questions, activities, and discussion centered around them. How the core books are used is decided by individual teachers. Books are read whole class, aloud, with small groups, independently, or with any combination of these approaches. As noted by Routman (1994) there is no mandate that these books have to be "covered." If a teacher does not like a title or does not have time to get to it, the book might simply be available in the room for children to choose to read independently.

Whole language, according to Cordiero (1992), is a philosophy which has had far-reaching implications in modern education. Components of a whole language program as organized by the teacher and the students could include reading aloud, writing aloud, shared reading, shared writing, guided reading, guided writing, independent reading, and independent writing. In actuality, Routman (1994) tells us there is little or no separation between reading and writing. Reading and writing are thought of as primary literary activities, and yet much of what our understanding of what we read comes from our discussion afterward, and preparation for writing can be greatly aided by talking over our ideas. Reading, writing, and talking are interrelated processes, and language arts activities should incorporate all three (Pillman). And while literature is viewed as the mainstay of the literacy program, literature is meant to include fiction and non-fiction and to encompass the content areas.

In contrast, textbook-driven instruction often focuses on memorization of facts (Jellum, 1995). There is very little that ties these facts in to their daily lives. Cazden (1991) describes the whole language movement as having an environment in which "children learn what they live, what they hear and try to speak, in a context of meaningful, functional use with people who care about them and have confidence they will learn". If children gain confidence in their ability to learn, errors become less of a stumbling block and more like stepping stones. It is the belief of Forester and Reinhard (1991) that when errors become stepping

stones, learning evolves. With the focus on progress and gradual development, students will find that errors often lead to more insightful learning.

Some educators have sought to find a term to replace "whole language" that they believe would better represent the cross-disciplinary nature of this philosophy, and at the same time make explicit its recognition and celebration of alternative communication systems (for example, mathematics, dance, music, art). To those who view language as a separate subject area, "whole language" seems to refer only to the language arts curriculum. In fact, in reference to language, the term encompasses the entire curriculum and stems from the view that language is a vehicle for thought and learning within all content areas, across all disciplines, and is, at the same time, developed through use in connection with content (Pace, 1995). Through the years this content connection has been handled by teachers in two main ways: whole-to-part, and part-to-whole.

In many schools and classrooms teachers refuse to accept curriculum randomness. They believe that content does matter, and that for school to work it must make sense to students - ideally, make sense all day long. Therefore, teachers identify a few big subjects of significance to children and then build extended units around those topics. In a unit on bears, for example, the children read (and hear read aloud) lots of different bear stories, build a library of favorite bear books, do bear readers' theater, study the biology of bears, work in research teams to investigate

different kinds of bears (polar, grizzly, panda, etc.), go to the zoo and see real bears (noting details in their journals), write bear stories and bear reports, do bear mathematics (calculating the days of hibernation, the number of blueberries a bear could eat, etc.), and, of course, do plenty of bear art. When teachers design such thematically coherent activities, they usually find they can quite easily fit in many of the old, mandated curriculum elements; these topics simply come up in a different way, at a different time, and in a different order (Zemelman, Daniels, & Hyde, 1993).

In the traditional American curriculum, information and ideas are presented to children in small "building blocks." While the teacher may find these subparts meaningful and may know they add up to an eventual understanding of a subject, their purpose and significance aren't always apparent to the children. This part-to-whole approach undercuts motivation for learning, because children don't understand why they are doing the work. But it also deprives children of an essential condition for learning - encountering material in its full, lifelike context. Holistic learning means that children gain knowledge most effectively by going from whole-to-part, when kids read whole books, write whole stories, and carry out whole investigations of natural phenomena (Zemelman et al., 1993).

Whether the approach is whole-to-part or part-to whole, how children think is intimately related to what they think. Teachers must help students develop the specific types of

thinking that our civilization values, such as analytical reasoning, interpretation, metaphorical thinking, creative design, categorization, hypothesizing, drawing inferences, synthesis, and so forth. Students need to experience these kinds of thinking for themselves with appropriate modeling and facilitation from their teachers and others. When they do, language, thinking, and conceptual understanding are intertwined as students construct ideas, systems, and processes for themselves (Zemelman et al., 1993).

Just as strategies cannot be directly observed, neither can they be directly taught. We teach for strategies. Experience is a powerful influence on the construction of reading strategies. "Anyone who has taught someone to swim knows that merely explaining the process does not work. Even modeling and showing is insufficient. The future swimmer must get in the water" (Fountas & Pinnell, 1996). In other words, students must be given a chance to practice and learn in all disciplines by trial and error.

When it comes to reading, practicing and learning can come in the form of instruction that should provide children with many opportunities to interact with print: listening to stories, participating in shared book experiences, making language-experience stories and books, composing stories through play, enacting dialogue through drama, and reading and writing predictable books. Reading is not phonics, vocabulary, syllabification, or other "skills," as useful as these activities may be. The essence of reading is a transaction between the words of an author and the mind of a

reader, during which meaning is constructed. This means that the main goal of reading instruction must be comprehension: Above all, students need to understand what is on a page (Zemelman et al, 1993).

Shared reading is another strategy used for reading acquisition. It is defined as any rewarding reading situation in which a learner - or group of learners - sees the text, observes an expert (usually the teacher) reading it with fluency and expression, and is invited to read along. According to Routman (1994), the learner is in the role of receiving support, and the teacher-expert accepts and encourages all efforts and approximations the learner (novice) makes. Each reading situation is a relaxed, social one, with emphasis on enjoyment and appreciation of the stories. Shared book approaches may include teacher reading, student reading, and/or paired reading. With older students, where shared reading is likely to occur with the use of the overhead projector or individual copies of the text, shared reading works fine with students reading at their desks. Usually the selection is read first by the teacher. On the next reading - or even on the first reading - many students will attempt to participate orally or will follow the text with their eyes. A student may volunteer or be selected by the teacher to do a shared reading. Putting students in charge creates ongoing enthusiasm for reading in the classroom. Shared reading may also be paired reading, with one person reading and another following along. This technique is a powerful one for supporting less able readers.

Usually a more competent reader is paired with a less competent one. The more able reader (the expert - teacher or student) reads the text aloud while the less able reader (novice - student) follows along (Routman, 1994).

Whole language environments keep language whole. Cazden (1991) feels that children learn by focusing on whole texts before becoming involved with the parts, or graphophonics, the words, and sentences. Peterson (1992) concurs, adding that learning is aided by experiencing wholes, not just bits and pieces. Students need to experience the big picture in order to make sense of all the little details, and this is where holism comes in. The California Department of Education (1995) has determined that a balanced and comprehensive approach to reading must have a strong literature, language, and comprehension program that includes a balance of oral and written language. A truism of contemporary thinking about language arts instruction is the value of integrating curriculum, of erasing the traditionally drawn line between reading instruction and writing instruction, and between these language arts and other curriculum areas (Gillespie, 1995).

Components of a Holistic Program

With the implementation of the Holistic approach to learning comes the need for literature. Books need to be available and accessible to all students. These books should cover a wide range of grade levels, and also a wide range of topics. Literature selections should be chosen according to

what the language arts, math, social studies, and science curriculums require.

As noted by Forester and Reinhard (1991), by knowing the district science, math, and social studies curriculum, knowledge and experience will suggest ways of drawing students into the topics; and then give them the freedom to explore the material in many different ways. Enliven and broaden the work by making interesting resources available, following up on special student interests that may not be part of the "regular" curriculum, connecting what is learned with issues known to be of interest to the students, and encourage them to discuss and present the material in their own ways.

Intertwining the curricular areas, or subject integration, not only will help students connect one subject to another, but it can also help improve their language acquisition. If language is learned best and easiest when it is whole and in natural context, then integration is a key principle for language development and learning through language (Goodman, 1993).

In the absence of materials teachers have developed their own integrated programs. As observed by Zemelman et al (1993), if a self-contained elementary teacher decides to start integrating the curriculum, her or his own good will and resolve can actually get it done. Perhaps this is why some elementary teachers have always taught thematically, and this approach is now growing so rapidly as part of the burgeoning Whole Language movement.

The thematic units put together by individual instructors do more than just tie different subjects together. The First Steps Reading Development Continuum, published by the Education Department of Western Australia (1996), tells us that adults and children are all learners moving along a continuum. Teachers and children come together as a community of learners. All can benefit from the three Rs: reflecting, representing, and reporting. Children need time to reflect on an experience and on what they have learned from it. Too often they hustle from one learning activity to another, with no time, no space and no structure to help them stand back and think about what they have learned. Children may need to represent their learning in a very concrete form. This may be by drawing a picture, constructing a diagram or by writing down their thoughts. In some learning areas such as math or science it may involve constructing a model. Children need to clarify their understandings by talking about them. Children refine, consolidate, and extend their reporting on what they know to a peer, a small group or their teacher.

Not all students get the same information or ideas from the same lessons. The lessons do, however, help form a common ground on which the children can build further knowledge. The integrated learning units, carefully planned to develop children's understandings of their physical and social worlds, give rise to many shared contexts in which children together learn, and learn language. In saying this, it does not mean that all children who take part in a

particular experience will necessarily learn the same things, but rather that having engaged in one excursion or science experiment, several children will have a focus for talking together, learning together, and developing further their individual understandings (Wilson, 1993).

As further noted by Wilson (1993) children do not naturally think and view learning in terms of isolated subject areas, but rather have a holistic outlook on life. This outlook should be reflected in the way the teacher teaches. To prevent learning from being fragmented and therefore not as relevant to the children's lives as it might be, we plan integrated units based on an inquiry approach to learning. Rather than the class program being a collection of unrelated activities from different curriculum areas, we focus upon what the children already know, the things they want to know, and how together we can find answers.

When discussing thematic units, the Intermediate Staff Development Guide (1995) observes that students profit when learning takes place within a thematic unit because: connections are formed among concepts that students may have seen as unrelated; skills are learned in a meaningful context; vocabulary and other concepts are developed and solidified through repeated usage over time; choices within the unit offer students ownership of their learning; opportunities for learning about the local community easily arise; learning time is maximized, because multiple subjects are integrated and intertwined; and learners are motivated by real-life connections in the theme and by opportunities for a

variety of activities. Thematic units, when properly created, enhance the students' overall classroom experience.

No matter what the theme or topic, Reif (1995) tries to collect and use picture books that relate to the subject. Good children's literature is for everyone, not just young children. The language is often poetic, filled with metaphor, and crisp in its simplicity. By contrast, Zemelman et al (1993) cautions that there is a natural tendency in schools to offer children simplified materials and activities, so that they are not overwhelmed with complexity. But too often we underestimate children and oversimplify things, creating materials or situations that are so synthetic as to be unlikelike - and, ironically, educationally worthless. The most notorious examples of this, of course, are the linguistically deprived stories appearing in many basal reading texts. We now understand that children routinely handle phenomenal complexity in their own daily lives - indeed, kids' effortless learning of the thousands of abstract rules underlying spoken language is proof of their ability to sort out the complex tangle of data the real world inevitably presents.

The whole language movement is not without its minor problems. Teachers at grades four, five, and six want to incorporate the principals of the whole language movement in their classrooms but are frustrated by the literature's apparent emphasis on emergent literacy - beginning reading. Much of the literature and training associated with whole language has been directed at teachers of kindergarten and

first grade (Cordiero, 1992). As a supplement to the literature another extension of the holistic concept involves writing and discussing, approaches which are not considered new to the education field. Journal writing engages students in both the expression and creation of thought. Indeed, there is a close reading-writing-thinking relationship (Bromley, 1993). Journals can provide a framework for classroom instruction that integrates language learning and language use around literature. Reading-writing workshops have several components that do not always occur in the same day; independent reading and writing, literature discussion lessons, and skills lessons.

In keeping with the Whole Language philosophy, the Desert Sands Unified School District (1995) has developed their curriculum guides with holistic goals in mind. For example, the fifth grade Desert Sands Unified School District content standards for language arts, or curriculum goals, aim all children's learning toward each student showing that he or she:

- *Proficiently uses print conventions and context to gain meaning and expression.

- *Proficiently uses the text's layout or signposts and strategies that are appropriate for the purposes of reading.

- *Is able to recognize style, domains, and various literary forms.

- *Reads beyond the stated (literal) meaning to understand the author's (intended or implied) meaning.

- *Is able to critically interact with text.

*Consistently self-selects appropriate text when reading for information, pleasure, and interest.

Conversely, the assumption may be made that teachers will incorporate whole language methods into their Social Studies lessons. The Social Studies Curriculum Guide, K-8 for Desert Sands Unified School District (1991) lists specific topics to be covered, with no implied manner of covering the topics:

United States History and Geography: Making a New Nation

1. The land and people before before Columbus
2. Age of exploration
3. Settling the colonies
4. Settling the Trans-Appalachian west
5. The war for independence
6. Life in the young republic
7. The new nations westward expansion
8. Linking past to present - the American people then and now

As noted by Cordiero (1992), however, a social studies program should be specifically designed to help students learn reliable information about important topics in a contextualized, relevant, and authentic way. It would teach them as a model for how similar learning might take place. In working with a topic, students work beyond it into the process of learning they are going through, so that they can master that process and use it to learn more. In this way, the curriculum guide supports the whole language process.

Literature Support in The Classroom

As evidenced in the previous section it is imperative that books of all genre, reading level, and subject be made available to all teachers. As Calkins (1994) noted, books can make classrooms bristle with meaning. More and more, teachers throughout the world are trusting that shared books can create a world for writing. Good teachers are more concerned than ever about beginning the year with wonderful literature, carefully selected by both teachers and children.

In one reading program currently being implemented in the Desert Sands Unified School District, the use of fiction, non-fiction, magazines, newspapers, dictionaries, thesauruses, etc. is encouraged. The use and importance of the availability of a variety of books within each classroom is outlined by the Education Department of Western Australia (1996) in the First Steps Reading Skills program. Desirable outcomes of a language program would show that the reader:

- is self motivated to read for pleasure or to satisfy a purpose;
- sees books as a major source of information;
- uses reading to enter worlds beyond personal experience;
- can reflect on, and responds to texts critically, providing different levels of interpretation and points of view.

The genre of reading selections reflects directly on how a reader may learn to write. Wilde (1993) suggests we can tell some things with more psychological accuracy by

fictionalizing than by trying to recount the actual experience. Fictionalizing can be as small a move as changing the name of the real person, or as large as changing the gender of age or setting. In other words, fictions stories lend themselves to better writing through example.

Non-fiction literature also plays a big role in the learning process, and therefore must be made available. to all classrooms. Parker (1992) observed that contrived books and materials designed solely to teach reading are being replaced with 'real' texts. This includes factual books designed to satisfy children's curiosity about the world in which they live. Teachers prefer real books because they are easier for children to read, they involve children more effectively and they are more typical of the reading material that children are likely to encounter when they become adults.

Fiction and non-fiction stories alike can play an important part in understanding people of all walks of life. Moss (1994) noted that novels that portray friendship can be used as the core of a Focus Unit that invites the students to engage in literary analysis and, in the process, to explore the meaning of friendship, factors that foster friendship and those that can threaten or destroy a relationship. On a personal level, students are encouraged to respond subjectively to the stories, to bring their own emotional and social histories to the texts, and to generate new understandings about themselves as well as others. Moss went on further to state that after their personal transaction

with each literary text, students reflect on their personal experiences within the story world and then step outside the story to focus on literary elements and authors' craft. Students examine settings, characters, conflicts, and themes, and identify examples of literary devices, such as foreshadowing, that have been used by authors of these friendship novels.

In order for middle-grade students to experience and explore literature, they need exposure to the diverse genres found in traditional and modern literature and to a wide variety of teacher-selected and self-selected books. Thematic units offer a context in which students are exposed to a wide variety of genres, authors, themes, and topics, and are given opportunities for in-depth literary study. Many of the books of these thematic units are housed in the classroom throughout the experience. These books are discussed in whole-class meetings, in small dialogue groups, and in informal conversations (Moss, 1994).

Moss goes into further detail by studying the history of fiction stories, and analyzing the story lines. Surveys of realistic fiction written for children reveal that a popular theme since the mid-nineteenth century has been the relationships of children within the family. Although contemporary family stories differ significantly from earlier ones, this theme continues to have broad appeal among young readers and suggests an interesting focus for a literature unit. Families in realistic fiction written between 1856 and 1903 are generally portrayed as warm, happy, and stable.

Religion plays an important role; male and females roles are carefully delineated; the household often includes members of the extended family such as a grandparent or a maiden aunt; and the children respect adult authority. Problems experienced by the central characters are often associated with attempting to live up to social and parental expectations, adhering to a moral code, or coping with financial difficulties. The family stories written between 1938 and 1960 continue to portray children who grow up in happy, loving, and secure settings, who respect their elders, and who accept the social roles imposed upon them. They are generally well-adjusted children who have few significant emotional problems. The plots tend to focus on everyday events and interesting adventures; problems are resolved to allow for happy endings. Thus, prior to the 1960s, realistic family stories featured traditional family structures, gender roles, and patterns of parent-child relationships in close-knit, stable family units. By the late 1960s realistic fiction reflected major social changes that shaped attitudes toward children and the family in subsequent decades. Traditional family patterns that characterized the earlier stories are no longer typical in the stories written after the mid-1960s. The happy, stable unit of the earlier literature is often replaced by a family in turmoil as it adjusts to a new culture, faces the prospects of surviving without one or both parents, handles the disruption resulting from divorce, or deals with the extended family, either grandparents or a foster home. Many middle-grade readers

today enjoy reading about children living in the more secure, stable families of the past. However, realistic fiction which focuses on the problems middle graders experience or are exposed to in their own lives has a more immediate appeal. This "new realism" which emerges out of the turmoil of the 1960s aftermath, addresses the issues and questions that confront young people growing up in today's complex world.

As observed by Moss (1994), historical fiction can turn sterile facts and figures about the past into living human experience. Writers of historical fiction portray the human dimension of an historical period and invite their readers to respond to the people and events of the past intellectually as well as emotionally. The reader who is drawn into the historical reality created by the writer can begin to feel the pain, suffering, and despair as well as the joy, triumphs, and hopes of the people in this reality. Both fiction and non-fiction are used to study history in the History Focus Unit. As Calkins (1994) noted, how differently some children go about studying the Civil War. In classrooms with theme studies, children read and discuss and write in response to Jim Murphy's *The Long Road to Gettysburg*, Paula Fox's *The Slave Dancer*, Mildred Taylor's *Roll of Thunder, Hear My Cry*.

To further support the importance of a variety of literature subjects being available to all students, Routman (1994) observes the role of multicultural literature in the classroom is to provide all students with extensive

opportunities to learn about the contributions, achievements, and traditions of people from diverse groups. It is to see their own culture depicted in literature, and to develop accurate concepts of self, others, and the world around them. Guidelines to keep in mind when selecting multicultural literature include, again, a variety of genres: folklore, poetry, historical fiction, informational articles, realistic fiction, biography and autobiography, fantasy, and mystery.

Only with the ample availability of literature will students truly begin to use reading as a tool. As Yokota (1995) points out in the Intermediate Staff Development Guide, a developmental reading and language arts program serves as a launching pad to introduce students to the very best writers in the widest variety of genres. Students strike out on their own to read numerous informational books, fictional stories about real or make-believe people, and poetry that makes them laugh or cry. Teachers use an integrated response-centered curriculum to probe the wealth of resources on every topic. Zemelman et al. (1993) supports this observation, stating that reading is a meaning-making process: an active, constructive, high-order thinking activity that involves distinctive cognitive strategies before, during, and after reading. Students need to learn how skillful, experienced readers actually manage these processes.

Allowing students the ability to hold and read their own books is not the only method that should be employed. Hearing books out loud is the beginning of learning to read

for most children, and this practice should extend from the home into the school, and up through the grades. Teachers should set aside time each day for reading aloud, selecting good literature of high interest to the children (Zemelman et al 1993).

Along with hearing books read aloud, reading books themselves, or discussing literature in small or large groups, students need further extension to aid the internalization of what they have learned. Working with writing journals is one way to do this. Journal writing works best when the writer can reflect or really think about their experiences and learn from them. When the student can do this, his writing becomes more exciting - and full of surprises (Kemper, Nathan, and Sebranek, 1994).

In conjunction with increased reading and writing, vocabulary can do nothing but increase. In the California State Board of Education's Teaching Reading (1996), it states that written language places far greater demands on people's vocabulary knowledge than does casual spoken language. Indeed, more advanced texts depend so heavily on precise wording to build meaning and message that, from the middle grades on, students' reading comprehension can be closely estimated by measures of their vocabulary. Krashen (1995) goes on to say there are great advantages to having all students read and discuss the same text, and there will be times when an unfamiliar but crucial word should be explained by the teacher. Discussion and verbal interaction such as this helps increase students' word power and knowledge.

All things considered, it is crucial that books of all types be readily available to all students in all classrooms. The upper elementary grade years are a golden age for conferring and mini-lessons, but they are also a golden age for reading-writing connections. The same things that can make these children so open to instruction from their teachers also make them open to instruction from the authors of the texts they read (Calkins, 1994).

Technology in the Classroom

The use of computers in the classroom has just recently become an accepted issue. It used to be that the general feeling of technology was that it had no place in education. Hadley (1995) cited Harold Howell II, President Lyndon Johnson's commissioner of education, as saying that the nature of education was beyond the capacity of a machine, and would remain so. Hadley further cites William Bennett, Secretary of Education in 1986, who stated that good schools know what works; they scorn fads and insist on fundamentals. However, as Snider (1992) points out, Alfred Bork described the role of the computer as an instrument of major revolution in the classroom. As pointed out by Hannafin and Savenye (1993), "Computers have permeated almost every facet of our business and personal lives" (p. 26). This shows the general acceptance of computers by society, and people therefore see them as a tool to improving knowledge. Indeed, as reported by The Desert Sun in the article titled Desert Sands Nominated for Award (1997), just the fact that the Desert

Sands Unified School District and its technology coordinator, Dr. George Araya, have been nominated for the 1997 Smithsonian Award is proof enough of this acceptance. There were only twenty nine nominees nationwide, all being chosen by major corporations who have a vested interest in the future of the country's educational products, namely the graduating students.

Although primary sources concerning information systems are limited, Hadley (1995) further cites Dyrli and Kinnaman who put classroom technology applications into four categories:

1. Objects of instruction;
2. Manager of instruction;
3. Delivery medium for instruction;
4. Instructional tools.

Information systems can be considered an instructional tool, designed to aid the teacher in the selection of appropriate teaching materials. Often they are compilations of information grouped together, but categorized for ease of selection by the operator for particular uses.

Information Systems

According to Hills (1990), an information system is defined as "the acquisition, processing, storage, dissemination and use of vocal, pictorial, textual, and numerical information by a microelectronics-based combination of computing and telecommunications" (p. 18). Hills gives six main points to consider when discussing the usability of

information systems:

- ease of learning
- being in control
- degree of effort
- system speed
- getting information in and out
- errors and error correction

First of all, an information system should be easy to learn. This speeds up its effective use, reduces human error and allows the user to gain an overall feeling of being in control. This feeling, however, can be altered or enhanced, depending on the degree of difficulty or ease that the user experiences when using the program. As Hills further points out, the speed of the system itself can interfere with the task at hand. For instance, using an information system can lead to irritation and frustration on the part of the user if the speed of the system is too slow. Another point of concern is the manner in which information is entered into or retrieved from the program. Information system designers and developers need to make certain the system format is compatible with the program's source of information. If the two are incompatible, errors can occur causing anxiety among the users. Other errors should also be avoided, but planned for in the design of the program. Care should be taken to minimize the effects of any potential errors, thus not causing catastrophic results. These areas of concern will be considered in the design and development of this master's project.

CHAPTER THREE

GOAL AND OBJECTIVES OF PROJECT

The goal of this project is to design and develop an information system that will enable fifth grade teachers to access a data base of Language Arts core literature books to use with all curriculum areas while teaching using the whole language philosophy. This program will:

A. allow the user to access books by different categories such as:

- genre
- subject matter
- curriculum area;

B. allow for a preview of any or all books selected from all categories;

C. include an across the curriculum listing of alternative book choices according to the information requested;

D. be operated by a master teacher who will access requested information for individual teachers.

In addition, this program will offer the option of printing out a variety of lists of titles according to what is needed by the individual instructor.

CHAPTER FOUR

DESIGN AND DEVELOPMENT

This chapter describes the design and development of the computer program known as The Book Look Nook (BLN). This program is an information retrieval system designed to aid teachers in locating various literature selections to coincide with thematic units they might be using. As a computer-based program, the BLN was developed to be operated by a single master teacher on behalf of other teachers interested in its contents.

Technical Requirements

In order for the BLN to operate, the following requirements must be met:

1. Software -- FileMaker^(R) Pro v 2.0.
2. Hardware
 - Macintosh Computer System
 - Minimum system: Macintosh Plus
 - System 7.0.2 or higher, AU/X 2.0
 - Minimum 4M with System 7.0; 8M recommended
 - One 800K disk drive and hard disk
 - Macintosh-compatible printer: ImageWriter Series, StyleWriter Series, LaserWriter Series, Apple Personal LaserWriter or Personal LaserWriter NT. Also supported is any other Chooser-compatible printer, such as Hewlett-Packard's DeskWriter, or LaserJet.

Economical Feasibility

Prices for the overall system are current as of the publication of this document. The current cost to set up The Book Look Nook is:

• Hardware: Macintosh computer	\$2,500.00
disk	
printer	
• Software: FileMaker Pro ^(R) 2.0 or higher:	\$200.00

Total:	\$2,700.00

Project Design

The Book Look Nook is designed primarily to ease the search process for teachers when seeking appropriate related reading materials for given units at the fifth grade level. The Book Look Nook is designed to:

1. compile many titles into one information system for ease of location;
2. allow for the quick overview of these titles to evaluate appropriateness of theme correlation;
3. decrease the time teachers would normally spend attempting to compile related books;
4. provide a list of books directly available to the user, not just books that might be available somewhere in stores.

Program Flowchart Layout

In designing The Book Look Nook, the first step taken was the production of a flowchart (see Figure 1) to organize the structure of the database and its functions. This was necessary for this program to be successful in terms of being user-friendly and efficient. It was a given that a set list of available books would be entered to create a database. Each record entry would include the title of the book, the author, the genre of the contents, the curriculum area under which the book fit, the general subject matter, or topic, covered in the book, the ISBN number of the book, and a short synopsis of what the reader could expect.

The Book Look Nook program itself is not limited to the database; instead, it would access the list of literature selections and manipulate the list according to what the user directs. Therefore, the next step in the design process was to give the user the various options of regarding the use and manipulation of records in the database. To cite records in the database, the user is given the options of viewing records in alphabetical order using any of five keys or categories: Title, Author, Genre, Curriculum, or Subject Matter. After selecting one of these choices, a list of books is displayed, and the user has the choice of either printing the list, going back to the previous page for more options, or quitting.

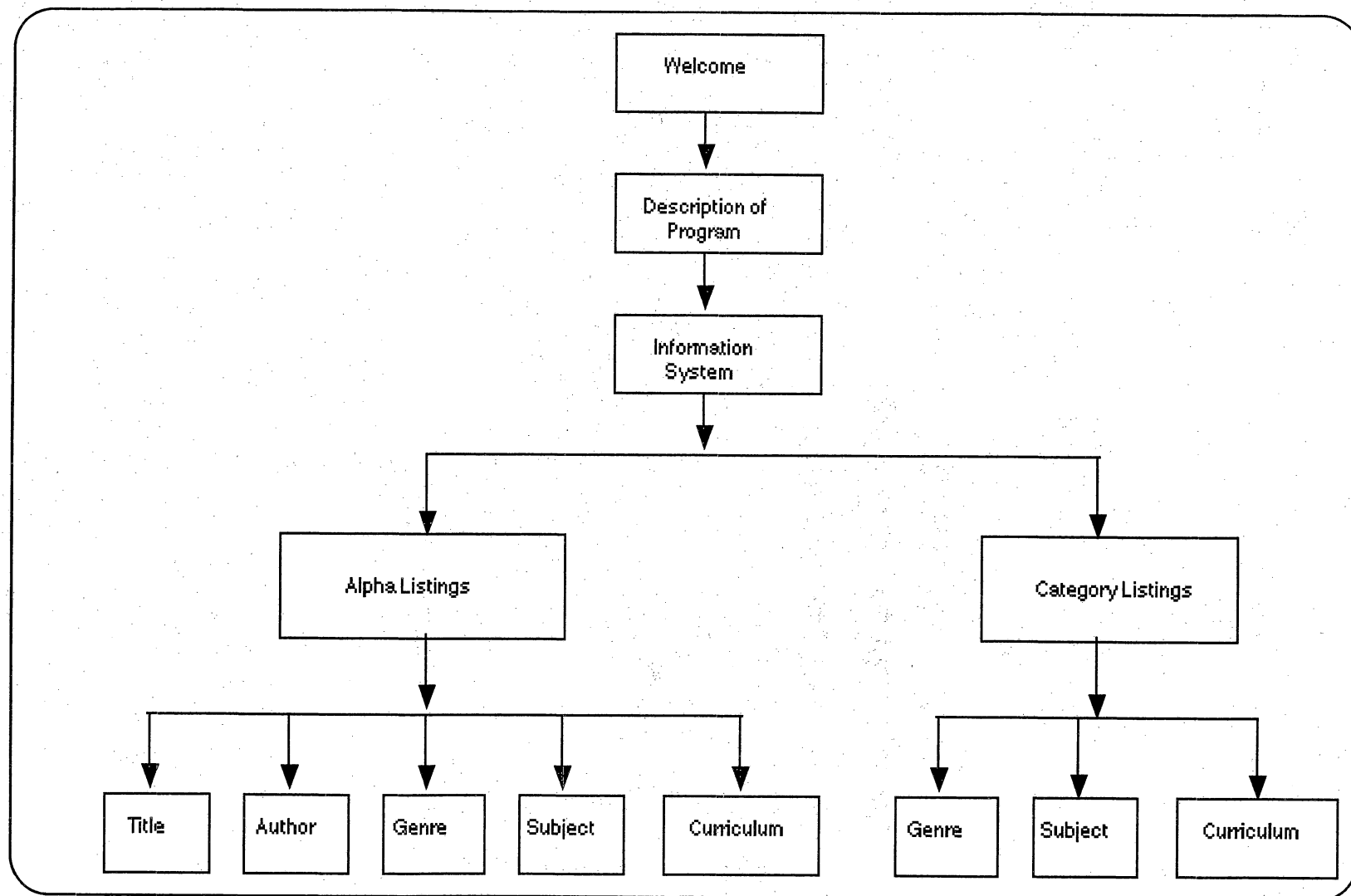


Figure 1. General flowchart of the Book Look Nook.

If the user does not want to access the information directly or alphabetically, there is a button for searching for literature with specific criteria. When this choice is selected, the user chooses specific listings for any combination of genre, subject matter, and/or curriculum. The Book Look Nook checks the database and shows the books meeting the specified criteria. Then the user is again given the options of printing the list, going to the next book, or quitting the program.

Screen Design and Layout

An opening page was designed for The Book Look Nook to welcome the user, and establish the fact that the program itself is user-friendly. The colors of yellow and fuschia were chosen as both eye-catching and contrasting, ensuring the attention of the program operator (see Figure 2). At the bottom is a button that simply states "Continue", allowing for simple instruction to the user to move to the next screen. It is assumed that the user has a general knowledge of programs, and is familiar with utilizing the mouse to click to another location. Upon clicking the button, the program operator is taken to a page which gives a quick overview of what The Book Look Nook is about (see Figure 3). It lists the expected outcomes of the program. At the bottom are two buttons, which allow the user to choose between continuing or quitting.

If the user chooses to continue, the next screen, labeled "Book Look Nook - Options," gives two further choices

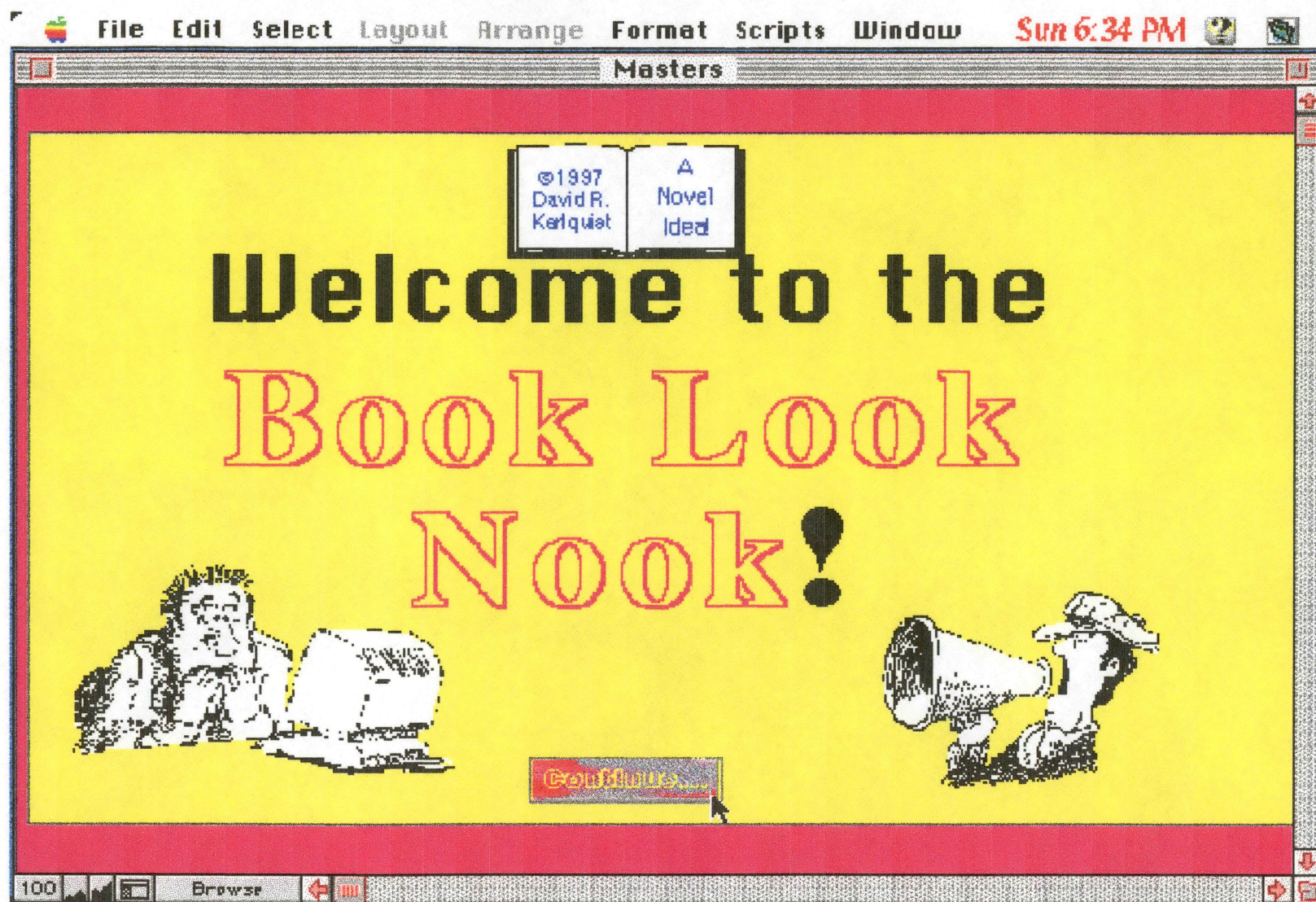


Figure 2. Welcoming page

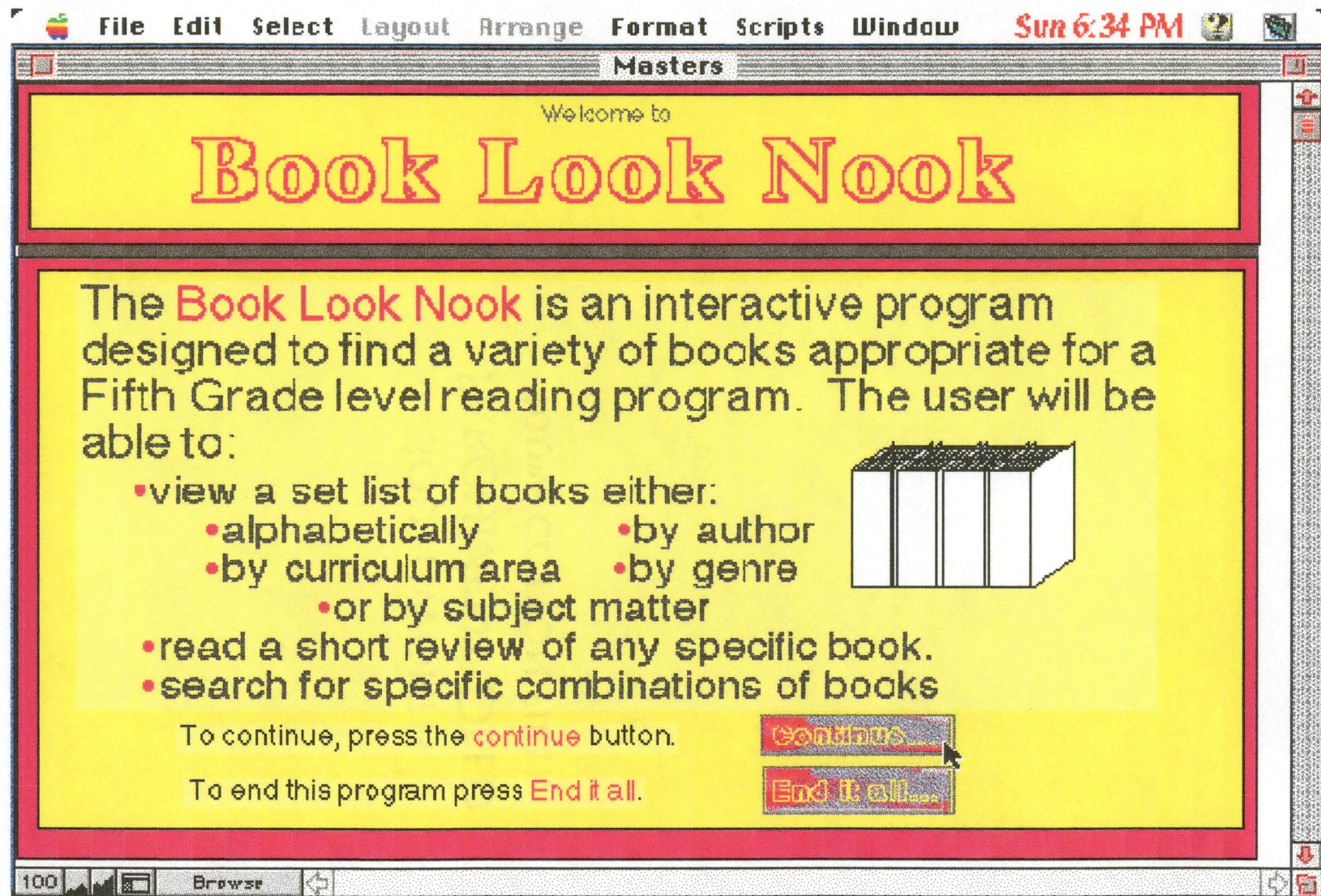


Figure 3. Program description page

to view a complete listing or to select specific titles (see Figure 4). This is the point at which the user first must decide how to view the books: to view the master list of books in a sequential order, or to search for certain types of books by choosing the search criteria. If the user decides to discontinue the program, there is a button at the bottom offering to end the session.

Instructions are listed at the top of the page directing the operator to pick one or the other choices offered. To view the master book list the user is directed toward a button by way of a downward-pointing finger (see Figure 5). The other option also uses an index finger to point out the other button which will lead to the search mode of the program.

The master list viewing option leads to yet another choice-making page. Here the user must tell the program which of five keys or categories will be used to alphabetize or sort the book titles in the master list (see Figure 6). Arrows point to the buttons necessary for the requested final sorting results. If the user finds herself/himself in the wrong location of the program, there is a button at the bottom of the page that will direct the user back to the Options Page. There is also a button to end the session. The five possible ways of listing the book selections include sorting by the author, title, genre, curriculum area, or by subject matter. When the selection button is clicked a list of books appears, with one of the columns (the one selected) in alphabetical order. The columns remain in the same

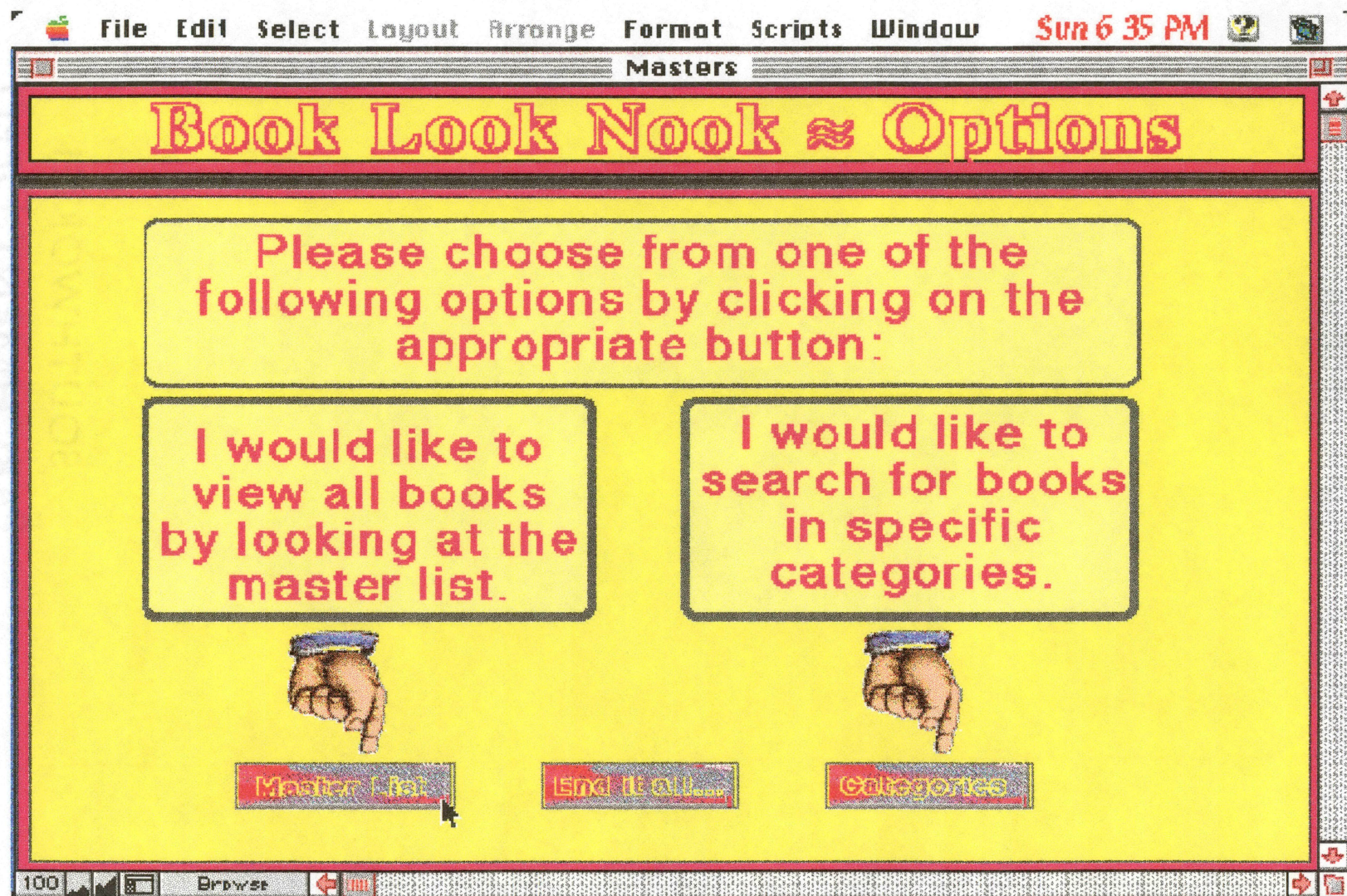


Figure 4. Options page

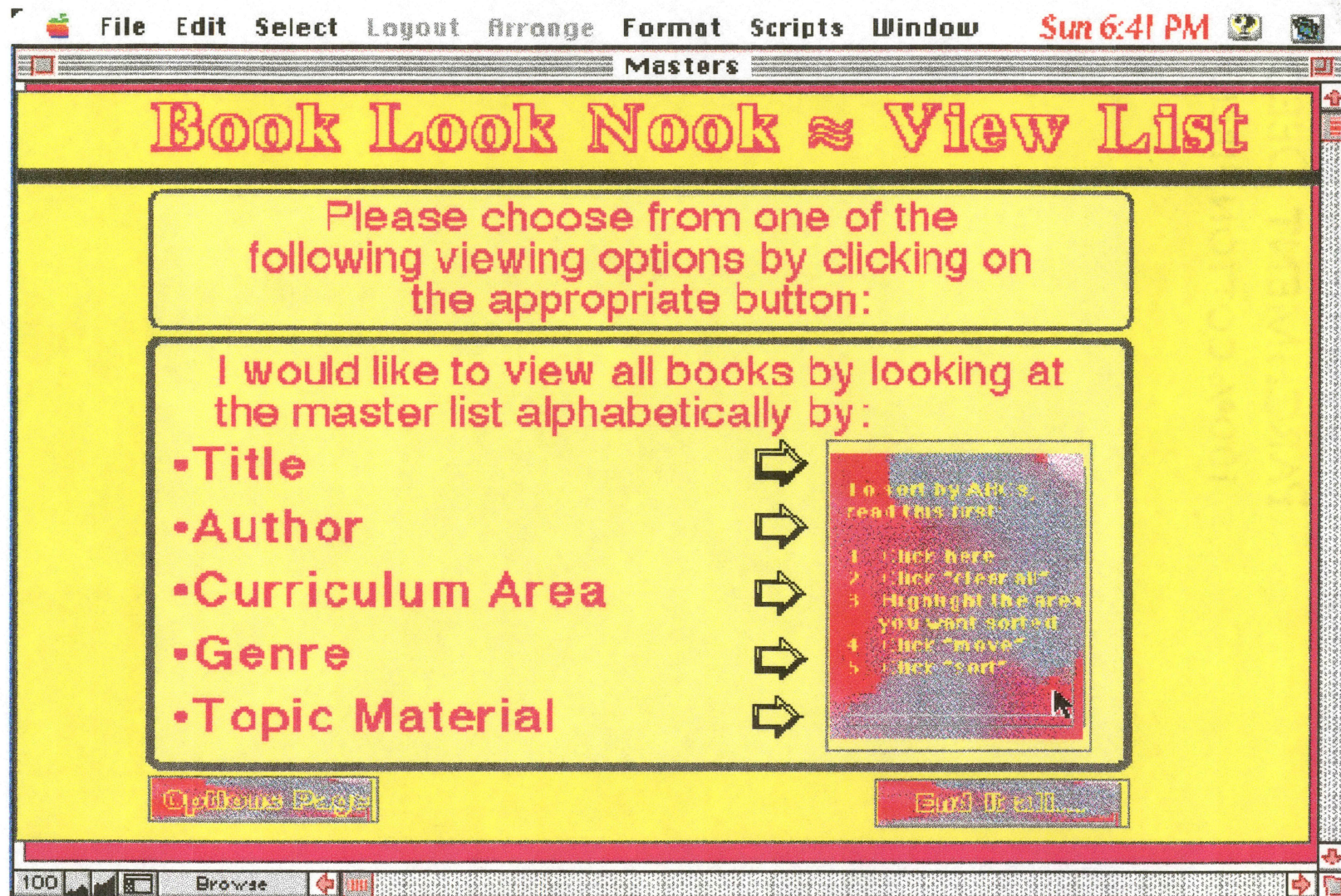


Figure 5. Alphabetical list choices page

File Edit Select Layout Arrange Format Scripts Window Sun 6 41 PM

Masters

Title	Author	Genre	Subject	Curriculum
A Cloak for the Dreamer	Aileen Friedman	Historical Fiction	Variety	Math
A Gathering of Days	Joan W. Blos	Historical Fiction	Relationships	Social Studies
A Grain of Rice	Helena Clare Pittman	Legend	Variety	Math
A Taste of Smoke	Marion Dane Bauer	Contemporary Fiction	Friendship	Literature
Across America on an Emigrant Train	Jim Murphy	Historical Nonfiction	Immigration	Social Studies
Amos Fortune - Free Man	Elizabeth Yates	Historical Fiction	Slavery	Social Studies
Anne of Green Gables	L.M. Montgomery	Historical Fiction	Friendship	Literature
Anno's Mysterious Multiplying Jar	Masachiro and Mitsumasa Anno	Fantasy	Variety	Math
Back to the Day Lincoln Was Shot	Beatrice Gormley	Contemporary Fiction	Variety	Literature
Beardance	Will Hobbs	Historical Fiction	Relationships	Social Studies

Options Page Print List End It All

100 Browse

Figure 6. Sample alphabetical page, by title

sequential order, only the book records themselves change order. As seen in Figure 6, the columns have been set up in an alternating light blue/dark blue pattern for ease of distinguishing the separate columns from one another.

If, from the Options Page, the operator clicks on the search button, a search screen appears. The search page (or screen) gives three blank search categories (see Figure 7) preceded by a button labeled "Clear Fields". The "Clear Fields" button clears the three category fields to allow the user to choose field criteria to fit a particular need. The user is provided three search fields to select titles by curriculum, genre, or subject matter. The search of matching records is activated by the Search button. The "Next Book" button, at the bottom of the left side of the page, and the "Previous Button" are used to navigate forward or backward through the current set of records. Once criteria have been chosen and the search initiated, the right side of the screen will display the matching record(s). Each record will list the title of the book, the author, the genre, the subject matter of the book, the curriculum under which it falls, a brief summary of the book itself, and the ISBN number, for ease of ordering. Figure 8 shows a typical search page, complete with all the above mentioned sections. The buttons at the bottom of the page give the choice of returning to a previous part of the program, or exiting.

If the "End It All" button is selected, the final page of the program appears, thanking the user for searching with the Book Look Nook. One final button at the bottom of the

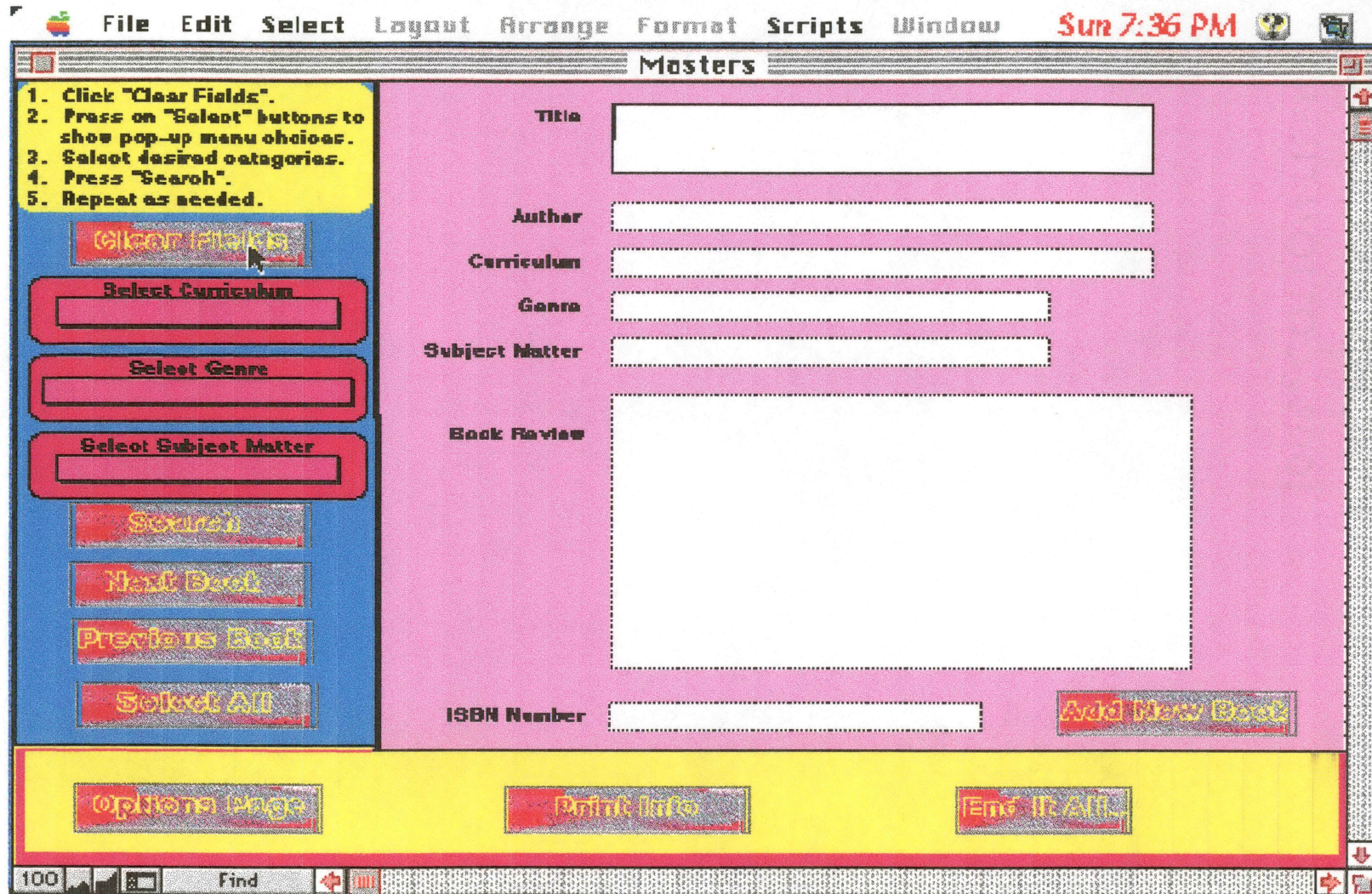


Figure 7. Blank search page



Figure 8. Sample category search page

page, "Press to End Program", is connected to a script, or internal program, that tells the program to reset itself and return to the first page for use at a later time (see Figure 9).

User-Friendly Features of

The Book Look Nook

The Book Look Nook has many features which make it user-friendly. These include such elements as operator control, multi-key search capabilities, and efficient navigation.

The Book Look Nook takes advantage of scripts, or internal programs, to maximize the control a user has over the program itself. BLN employs a non-linear flow of operations and structure, allowing the program operator to choose where he/she will go next. There is not a predetermined set of pages the user must negotiate in order to use this program.

When searching for a mass listing of books, the BLN employs five keys with which to sort any of the five available categories into alphabetical order. This feature maximizes the benefits of the individual categories by allowing the user to choose what is best for him/her.

Searching for specific books in specific categories is enhanced by the multi-key search capabilities of the BLN. Program operators are able to access individual books by opting to search by using one, two or all three search categories together. Another user-friendly feature of the category search page is the Clear All button. This item

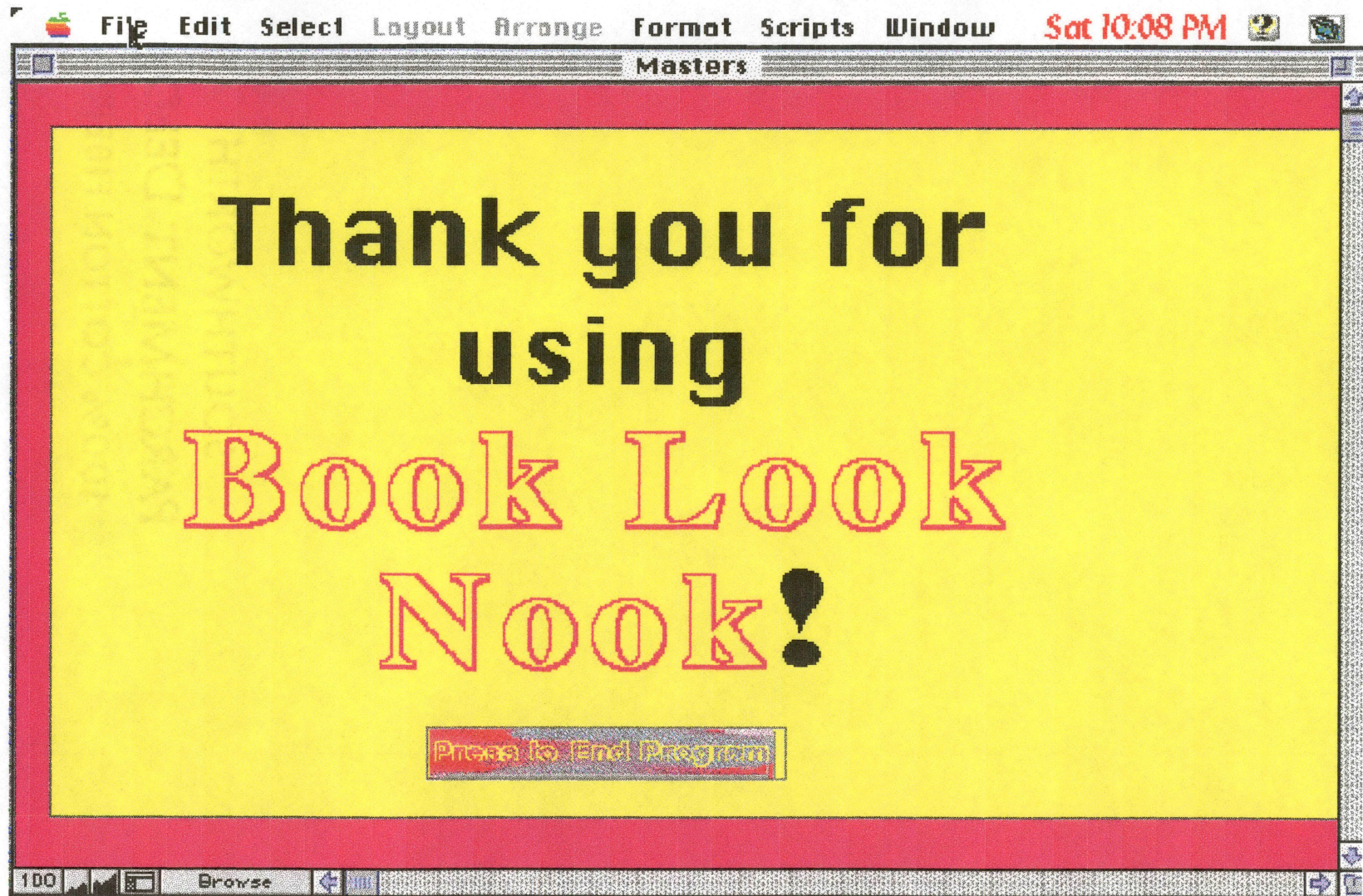


Figure 9. End page

wipes the current search criteria off the page, and resets the program allowing for new search items to be entered.

Navigation throughout the Book Look Nook program is very user-friendly. This program gives the option, and has the capability, of letting the program operator click on a button to exit the program at any time from any page. There is also a button that allows the user to return to the Options page at any time to change the direction of search. On the Search page, two separate buttons give the program user the ability to view either the previous or the next records in the list. Another friendly feature is the use of a scroll bar. When viewing the list alphabetically the BLN shows a scroll bar on the right side of the page, facilitating viewing of the entire list.

In addition to the above-mentioned features, both the Category Find page and the Book List page also have a Print List button. Upon clicking this button the user is given an ordinary list of printer options from which to choose. This allows the user to obtain a hard copy of the literature selections.

Scripting

As mentioned above, scripting plays a large role in the user-friendliness of The Book Look Nook. The miniature internal programs, or scripts, are attached to buttons that are clicked by the program operator for activation. Almost every button throughout the Book Look Nook is attached to a script.

To begin with, every page has been given a specific name behind what is actually seen. This is provided so that the internal workings of the program can recognize where it needs to be according to commands within scripts or attached to buttons. Some buttons, such as the "Continue" button on the opening page, have simple one-step commands that take the program to the next page in the flowchart sequence. The clicking of this button activates the internal command to move to the Book Look Nook Options page.

The Book Look Nook Options page has several one-step buttons. On the Category Find page buttons labeled Next Book and Previous Book are given the one step job of either moving to the next page forward, or the next page backward. The "End It All" button, found throughout the program, takes the user to the final page to end the user session. The remaining two buttons, "Master List" and "Categories", direct the program operator in the direction they have chosen to bring up the next sequential page in either direction.

When the user chooses "Master List", the program moves to the View List page. This page contains five buttons, each with specific instructions for what to do once the button has been activated. These buttons are not one-step commands, but have internal scripts that direct the program what to do. When the mouse is clicked on the button next to Alphabetical Order of Titles (see Appendix B), Step One tells the program on which page to focus first. Step Two allows the program to locate all records within the page specified. The third step asks the script to place the main emphasis on the Titles

column of data. The fourth script command tells the program to sort the selected data category. Page Setup, command number five, sets up the program to display the requested information. The final step in the internal script is to return the program to the browse mode, the only mode that the user ever sees. All of these steps take place automatically when the mouse clicks on the right button. In this particular case, the sort button triggers an inquiry screen where the user must select the category chosen for sorting, and deselect the current category if applicable. Clicking on "Done" completes the script commands, displaying the requested information on the computer screen.

If the user chooses the Category button on the Book Look Nook Options page, a completely different screen appears. The page known internally as the Category Find page appears with a series of button choices. The first button in the stack is labeled Clear Fields. The operator presses this first, and the internal script clears all areas pertaining to the three subsequent options. The script (see Appendix C) commands the program to enter the browse mode (allowing the program to operate), then specifies the layout named Category Find Page. The remaining two lines of script set the page up and get it ready to find all records that match the criteria chosen with the next three buttons.

The next choices, labeled Select Curriculum, Select Genre, and Select Subject Matter, offer the user handy pop-up (or pulldown) menus with selections from which to select the literature criteria. These buttons can be freely used over

and over again, changing field options as much and often as necessary. These buttons by themselves have an internal scripton which to run. Instead, the information selected by in one, two, or all three of these menus by the program operator is used by the next button, labeled Search (see Appendix D). The first step commanded by the script is to sort all of the books according to the selected criteria, as mentioned above. Then the computer is told to setup the page once again, and display the findings in the Browse mode.

A script function is also attached to the button labeled "Select All" (see Appendix E). This button allows the user to look at all available literature records without having to select specific criteria.

One other button on the Category Find page is one that reads "Add New Book" (see Appendix F for script). This button lets the program expand by allowing the addition of new literature selections. The script written for this button simply goes to the last record in the list which is an unseen blank screen. The action of clicking on this button allows the blank screen to be used for adding records.

The final button in The Book Look Nook is on the last page of the program itself. This button reads Press to End Program. Upon activation, this button seemingly takes the user back to the beginning page of the program. Internally the pressing of this button automatically resets the program. By doing this the program is ready to be accessed again at a later time.

Formative Evaluation

In order to assess the validity of the goals of this project an evaluation was performed on The Book Look Nook by two fifth grade teachers from the Desert Sands Unified School District. This evaluation was completed on a voluntary basis, without compensation (see Appendix G for IRB permission). The teachers involved in this evaluation worked with the program individually, without knowledge of each other's impressions.

Procedure

Before beginning the testing of The Book Look Nook, the evaluating teachers each read the following statement:

The Book Look Nook is an information system program designed by David R. Karlquist with the needs of fifth grade teachers in mind. It is designed to be a time-saving tool to enhance the language arts program, while allowing and aiding integration of literature across the curriculum. The Book Look Nook is built to be operated by a Master Operator who is familiar with FileMaker^(R) Pro, software that is scarce in the Desert Sands Unified School District. In this program you should be able to obtain information about many available literature selections in a variety of ways. The manner in which you find the information depends on your particular needs. This evaluation is strictly for informational purposes for the program designer and in no way obligates you to anything, and your identity will remain confidential. The designer asks that your observations be honest and open. Thank you for agreeing to review this software.

Upon reading and agreeing to the above statement, the teachers were shown which program to open on the Macintosh computer which contains the program. They were allowed to navigate freely, while the designer took notes on any comments or suggestions. Questions were also noted, and help given if necessary.

Feedback and Recommendations

Both subjects commented on the brightness of the opening screen, as it grabbed their attention immediately. In general navigation created no problems. Further clarification was necessary when one of the evaluators attempted to sort the book list by author. The instructions on the button were correct and easy to understand, but they disappeared the minute the button was pressed. Once the procedure had been attempted the operator had no difficulty repeating the steps, and needed no further help. Both evaluators were confused by the pop-up menus on the category search page. The fact that they are pop-up menus was not evident, but once they were shown how to access the choices there were no further problems. One teacher recommended a button with which to print the literature information.

Revisions

Print buttons were added not only to the book list section as suggested, but to the category search section as well. This enables users to print book summaries as necessary. A short instruction procedure was added to the category search page for further clarification.

Strengths

The main strengths of The Book Look Nook are its user-friendliness and usefulness. Concerning navigation, the program itself is intuitive. There are options on almost every page to either exit the program or move to another

section with ease. Although familiarity with FileMaker^(R) Pro is helpful, it is not absolutely necessary. The evaluators of this program commented on how much time they would be able to save if they had access to a program such as this. Both expressed frustration over the amount of time they are now spending looking for appropriate reading materials that integrate different subjects and curriculums.

Limitations

There are four main limitations that are evident:

1. The Book Look Nook currently is limited in use because of the lack of availability of FileMaker^(R) Pro among loaded software within the district;
2. The program is available only on a Macintosh platform
3. The program is unable to print out a list of book individually selected by the operator;
4. The program is designed only for classroom use, with a single user or operator in mind.

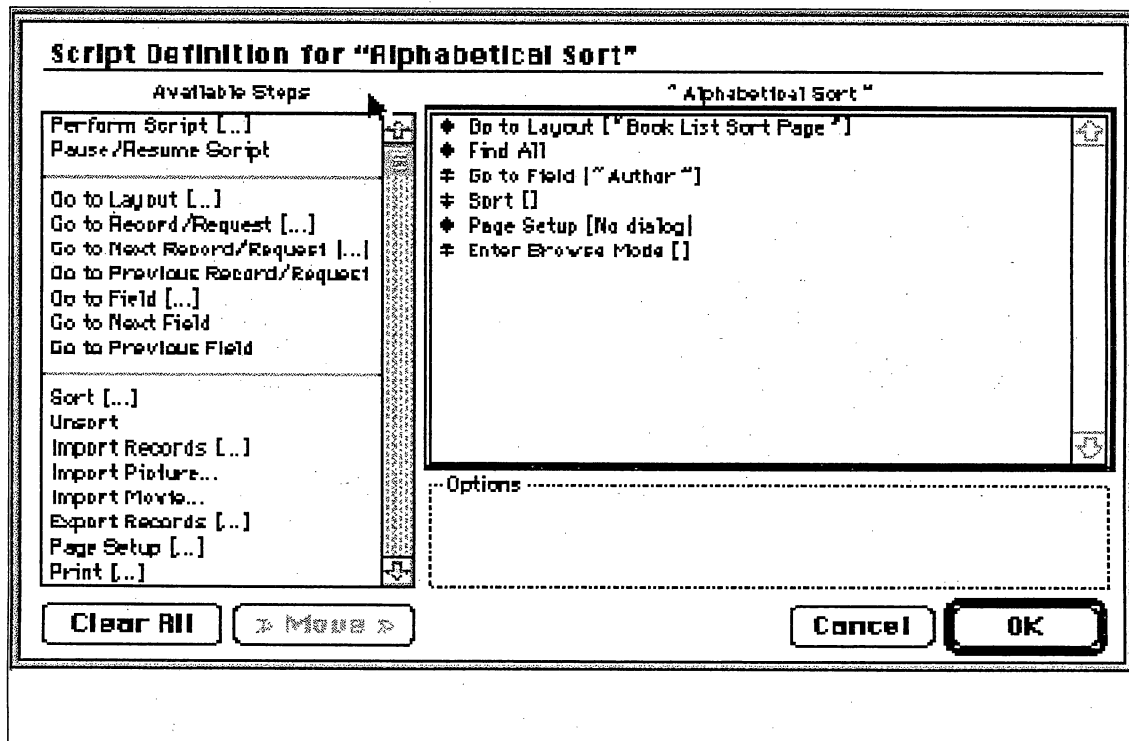
Recommendations

Three main recommendations are presented here as a result of the formative evaluation of The Book Look Nook:

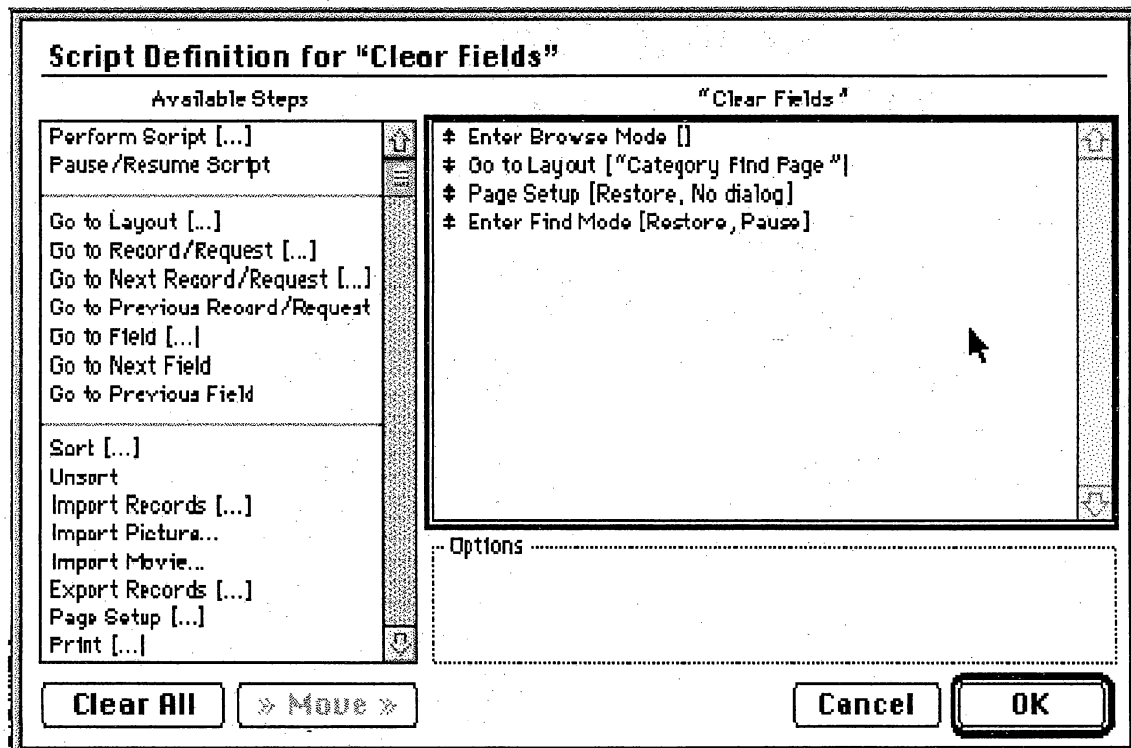
1. The program should be expanded to include more features such as:
 - the ability to select and print a list of selected books from the master list regardless of category or criteria

- be available in formats other than Macintosh;
2. The program should be upgraded to use more recent versions of a relational database such as FileMaker Pro(R) 3.0;
 3. Teachers and technology mentors should consider more seriously the development and use of information systems in the classroom.

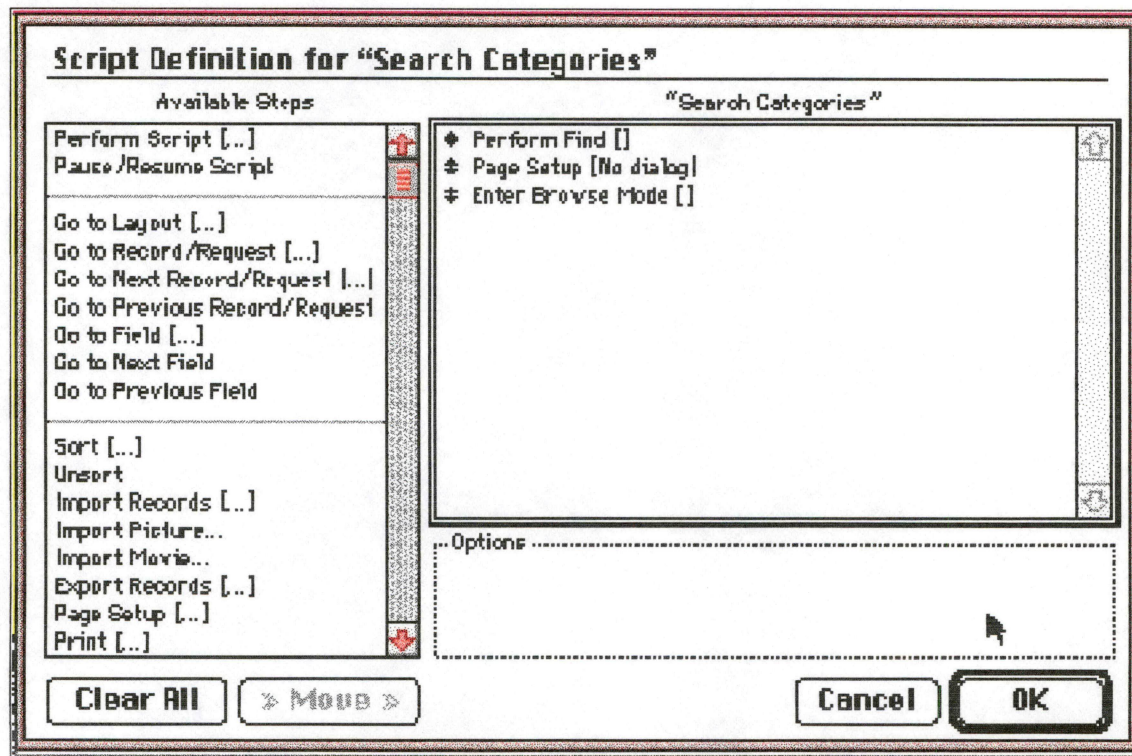
APPENDIX B: ALPHABETICAL SORTING
BUTTON SCRIPT



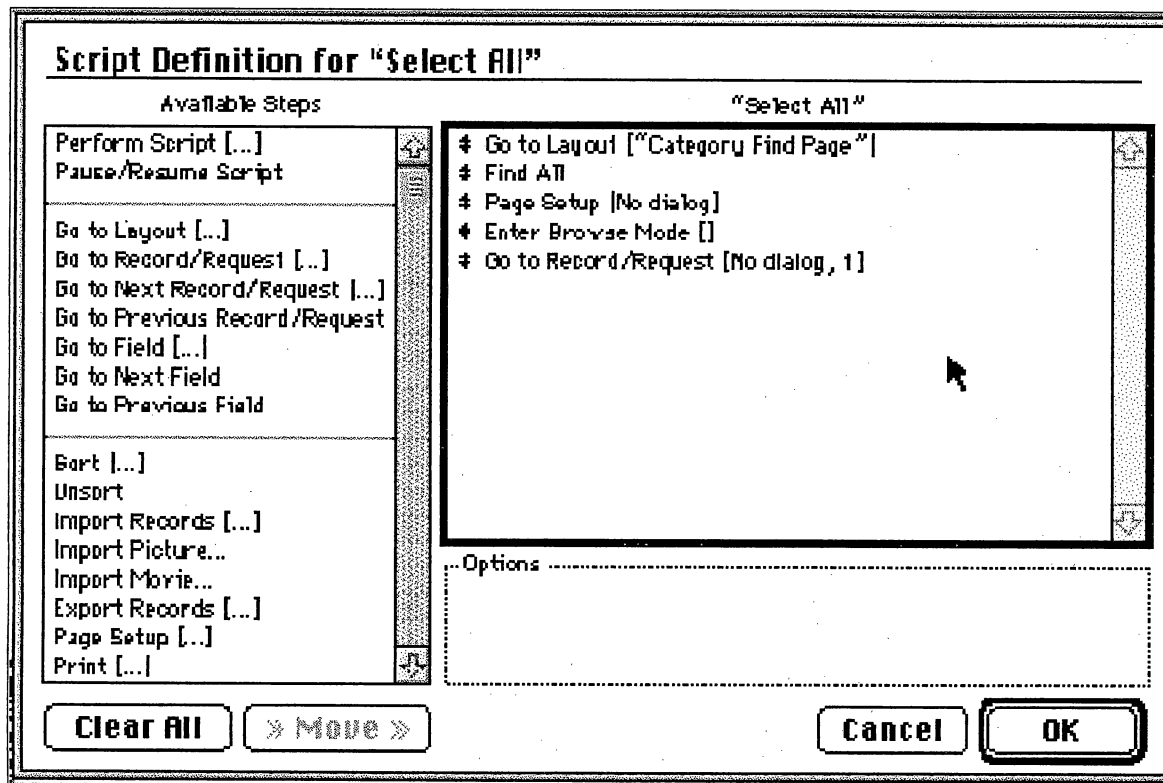
APPENDIX C: CLEAR FIELDS
BUTTON SCRIPT



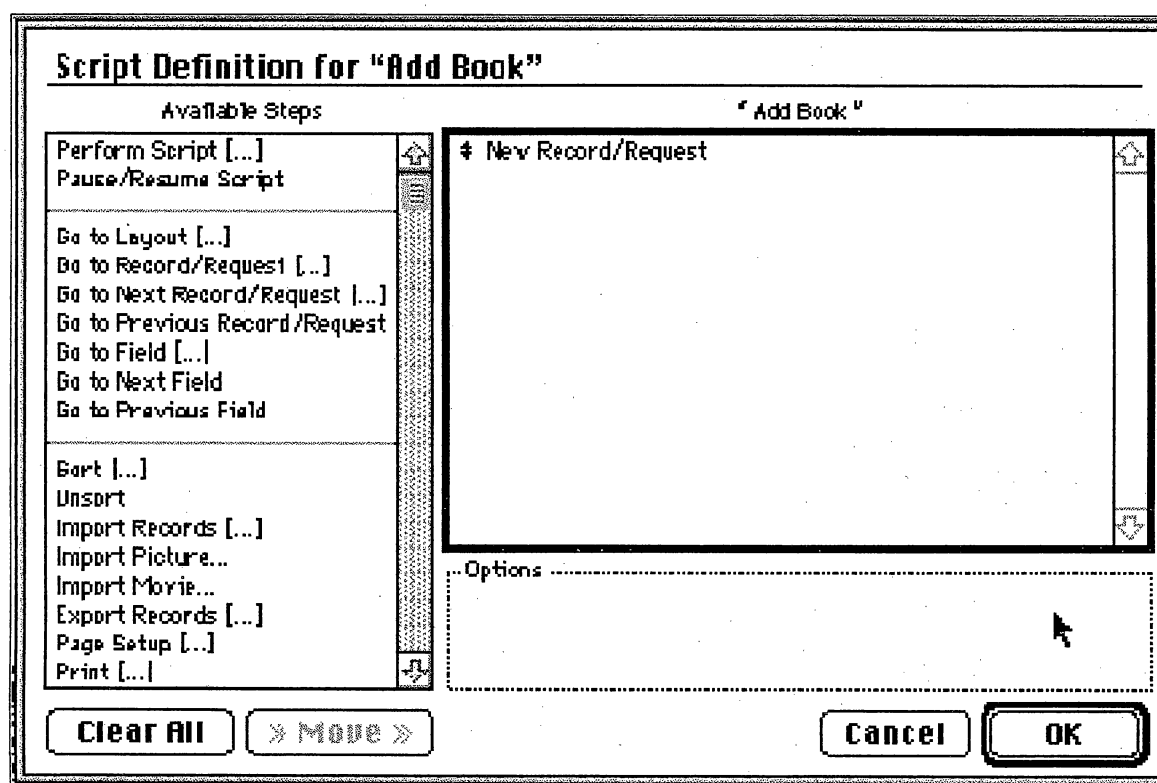
APPENDIX D: SEARCH CATEGORIES
BUTTON SCRIPT



APPENDIX E: SELECT ALL
SCRIPT



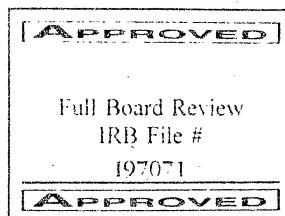
APPENDIX F: ADD NEW BOOK
SCRIPT



APPENDIX G: IRB APPROVAL
LETTER



CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO



The California
State University

May 20, 1997

David Karlquist
c/o Dr. Rowena Santiago
California State University
5500 University Parkway
San Bernardino, California 92407

Dear Mr. Karlquist:

Your application to use human subjects in research has been reviewed by the Institutional Review Board (IRB). Your application has been approved. Please notify the IRB if any substantive changes are made in your research prospectus and/or any unanticipated risks to subjects arise.

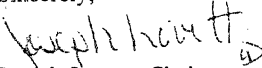
Your informed consent statement should contain a statement that reads, "This research has been reviewed and approved by the Institutional Review Board of California State University, San Bernardino."

If your project lasts longer than one year, you must reapply for approval at the end of each year. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Lynn Douglass, IRB Secretary. Ms. Douglass can be reached by phone at (909) 880-5027, by fax at (909) 880-7028, or by email at ldouglas@wiley.csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,


Joseph Lovett, Chair
Institutional Review Board

JL/ld

cc: Rowena Santiago, Science, Mathematics and Technology Education

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